



**DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITE DE COOPERATION EN MATIERE DE BREVETS (PCT)**

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/FR 98/02634

A. CLASSIFICATION OF SUBJECT MATTER					
IPC 6	C12N15/34	C12N15/86	C07K14/01	C12N7/04	C12N5/10
	C12N7/00	A01K67/027	C12Q1/68	C07K16/08	G01N33/569

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>MEEHAN B M ET AL: "SEQUENCE OF PORCINE CIRCOVIRUS DNA: AFFINITIES WITH PLANT CIRCOVIRUSES" JOURNAL OF GENERAL VIROLOGY., vol. 78, no. 1, January 1997, pages 221-227, XP002068398 READING GB cited in the application see the whole document</p> <p>---</p> <p>-/-</p>	<p>1-4, 6, 8-11, 13, 15, 16, 19, 21-24, 36, 38</p>

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

### \* Special categories of cited documents :

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- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "&" document member of the same patent family

Date of the actual completion of the international search

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16/06/1999

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# INTERNATIONAL SEARCH REPORT

Inte	rnal Application No
	PCT/FR 98/02634

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>MANKERTZ, A. ET AL.: "Mapping and characterization of the origin of DNA replication of porcine circovirus"  <i>JOURNAL OF VIROLOGY</i>,  vol. 71, no. 3, March 1997, pages  2562-2566, XP002078782  ICAN SOCIETY FOR MICROBIOLOGY US  cited in the application  see the whole document</p> <p>---</p>	1-4, 6, 11, 13, 15, 16, 19, 21-24, 36, 38
P, X	<p>HAMEL, A.L. ET AL.: "Nucleotide sequence of Porcine Circovirus associated with postweaning multisystemic wasting syndrome in pigs"  <i>JOURNAL OF VIROLOGY</i>,  vol. 72, no. 6, June 1998, pages  5262-5267, XP002078783  see the whole document</p> <p>---</p>	1
P, X	<p>MEEHAN B M ET AL: "Characterization of novel circovirus DNAs associated with wasting syndromes in pigs"  <i>JOURNAL OF GENERAL VIROLOGY</i>,  vol. 79, no. 9, September 1998, pages  2171-2179, XP002090386  see the whole document</p> <p>---</p>	1
P, X	<p>MOROZOV I ET AL: "Detection of a novel strain of porcine circovirus in pigs with postweaning multisystemic wasting syndrome"  <i>JOURNAL OF CLINICAL MICROBIOLOGY</i>,  vol. 36, no. 9, September 1998, pages  2535-2541, XP002090921  see the whole document</p> <p>---</p>	1
P, A	<p>ALLAN G M ET AL: "ISOLATION OF PORCINE CIRCOVIRUS-LIKE VIRUSES FROM PIGS WITH A WASTING DISEASE IN THE USA AND EUROPE"  <i>JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION</i>,  vol. 10, January 1998, pages 3-10,  XP002068503  see the whole document</p> <p>---</p>	1, 32
P, A	<p>ELLIS J ET AL: "ISOLATION OF CIRCOVIRUS FROM LESIONS OF PIGS WITH POSTWEANING MULTISYSTEMIC WASTING SYNDROME"  <i>CANADIAN VETERINARY JOURNAL - REVUE VETERINAIRE CANADIENNE</i>,  vol. 39, January 1998, pages 44-51,  XP002068502  see page 50, column 1, paragraph 3</p> <p>---</p> <p>-/-</p>	1, 32



## DEMANDE INTERNATIONALE PUBLIEE EN VERTU DU TRAITE DE COOPERATION EN MATIERE DE BREVETS (PCT)

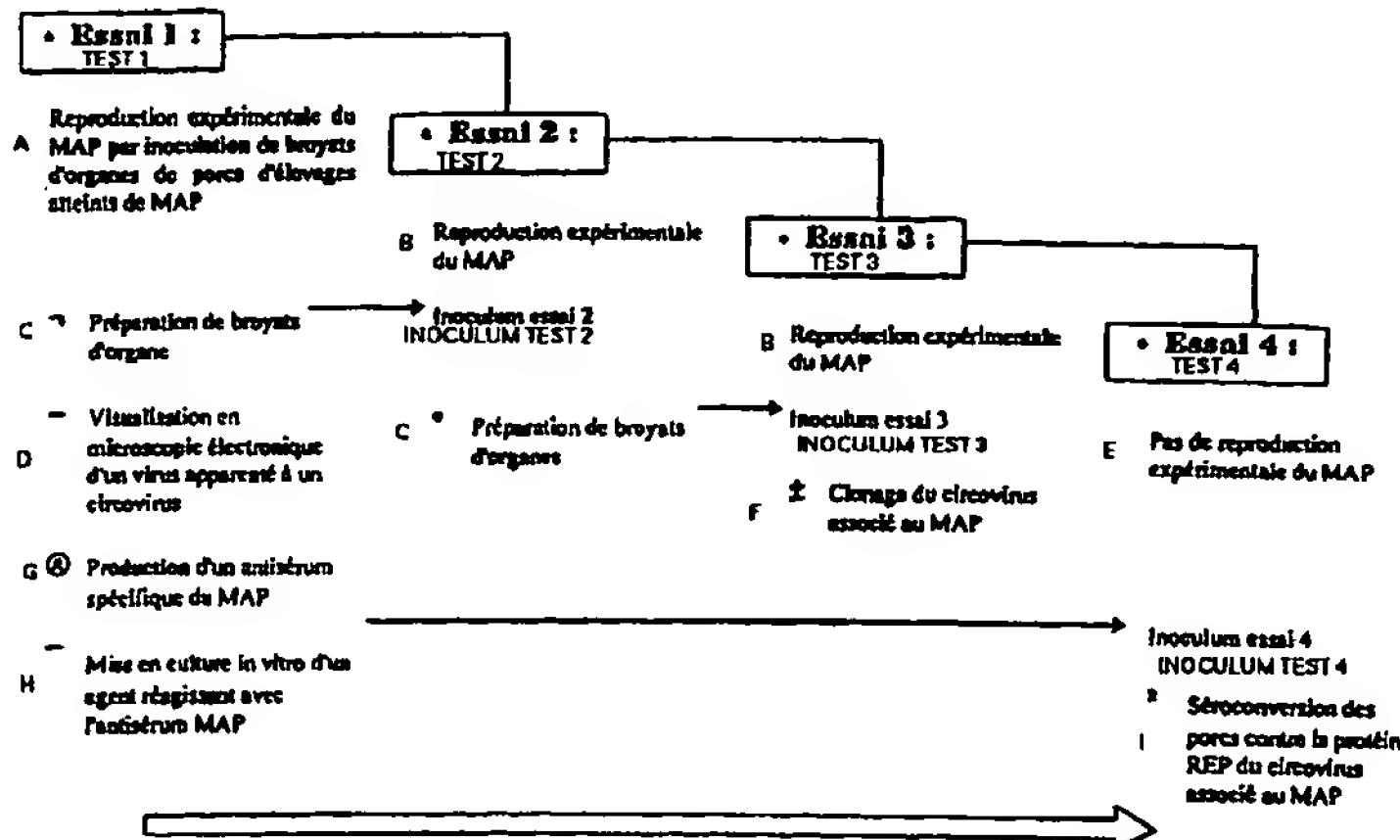
(51) Classification internationale des brevets <sup>6</sup> :  C12N 15/34, 15/86, C07K 14/01, C12N 7/04, 5/10, 7/00, A01K 67/027, C12Q 1/68, C07K 16/08, G01N 33/569		A2	(11) Numéro de publication internationale: WO 99/29871  (43) Date de publication internationale: 17 juin 1999 (17.06.99)
(21) Numéro de la demande internationale: PCT/FR98/02634  (22) Date de dépôt international: 4 décembre 1998 (04.12.98)  (30) Données relatives à la priorité: 97/15396 5 décembre 1997 (05.12.97) FR		(FR). CARIOLET, Roland [FR/FR]; 30, rue de l'Aubépine, F-22440 Ploufragan (FR). MADEC, François [FR/FR]; Rue du Valais, F-22000 Saint-Brieuc (FR).  (74) Mandataires: MARTIN, Jean-Jacques etc.; Cabinet Regimeau, 26, avenue Kléber, F-75116 Paris (FR).	
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<p style="text-align: center;">Publiée</p> <p><i>Sans rapport de recherche internationale, sera republiée dès réception de ce rapport.</i></p>			

(54) Title: CIRCOVIRUS SEQUENCES RELATED TO PIGLET WEIGHT LOSS DISEASE (PWD)

(54) Titre: SEQUENCES DE CIRCOVIRUS ASSOCIE A LA MALADIE DE L'AMAIGRISSEMENT DU PORCELET (MAP)

## (57) Abstract

The invention concerns the genome sequence and the nucleotide sequences coding for the PWD circovirus polypeptides, such as said circovirus structural and non-structural polypeptides, and vectors including said sequences and cells or animals transformed by said vectors. The invention also concerns methods for detecting said nucleic acids or polypeptides and kits for diagnosing infection by a PWD circovirus. The invention further concerns a method for selecting compounds capable modulating the viral infection. Finally the invention concerns pharmaceutical, in particular vaccine, compositions for preventing and/or treating viral infections caused by PWD circovirus and the use of said vector for preventing and/or treating diseases by gene therapy.



- A...EXPERIMENTAL REPRODUCTION OF PWD BY INOCULATING CRUSHED MATERIALS OF PWD-INFECTED BREEDING PIG ORGANS
- B...EXPERIMENTAL REPRODUCTION OF PWD
- C...PREPARING CRUSHED MATERIALS OF ORGANS
- D...ELECTRONIC MICROSCOPIC DISPLAY OF A VIRUS RELATED TO A CIRCOVIRUS
- E...NO EXPERIMENTAL REPRODUCTION OF PWD
- F...± CLONING OF PWD-RELATED CIRCOVIRUS
- G...PRODUCING A PWD-SPECIFIC ANTISERUM
- H...IN VITRO CULTURE OF AN AGENT REACTING TO PWD ANTISERUM
- I...SÉROCONVERSION OF PIGS AGAINST REP PROTEIN OF PWD-RELATED CIRCOVIRUS
- J...SÉROCONVERSION OF PIGS AGAINST REP PROTEIN OF PWD-RELATED CIRCOVIRUS

**INTERNATIONAL SEARCH REPORT**

In national Application No  
PCT/FR 98/02107

**C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CLARK E. G.: "Post-weaning multisystemic wasting syndrome" PROCEEDINGS OF THE AMERICAN ASSOCIATION OF SWINE PRACTITIONERS. ANNUAL MEETING, 1 March 1997, pages 499-501, XP002068397 cited in the application see page 500, right-hand column, line 18-39. ---	1-7, 28, 29
P, X	MEEHAN B.M. ET AL.: "Characterization of novel circovirus DNAs associated with wasting syndromes in pigs" JOURNAL OF GENERAL VIROLOGY, vol. 79, no. 9, September 1998, pages 2171-2179, XP002090386 see the whole document	1-7, 11-17, 19, 27-29
P, X	HAMEL A.L. ET AL.: "Nucleotide sequence of Porcine Circovirus associated with postweaning multisystemic wasting syndrome in pigs" JOURNAL OF VIROLOGY, vol. 72, no. 6, June 1998, pages 5262-5267, XP002078783 see the whole document	1-14, 27
P, X	MOROZOV I. ET AL.: "Detection of a novel strain of porcine circovirus in pigs with postweaning multisystemic wasting syndrome" JOURNAL OF CLINICAL MICROBIOLOGY, vol. 36, no. 9, September 1998, pages 2535-2541, XP002090921 see the whole document	1-7, 11-14, 27, 29
A	MEEHAN B.M. ET AL.: "Sequence of porcine circovirus DNA: affinities with plant circoviruses" JOURNAL OF GENERAL VIROLOGY, vol. 78, no. 1, January 1997, pages 221-227, XP002068398 cited in the application see page 224; figure 3	11-14
A	MANKERTZ A. ET AL.: "Mapping and characterization of the origin of DNA replication of porcine circovirus" JOURNAL OF VIROLOGY, vol. 71, no. 3, March 1997, pages 2562-2566, XP002078782 cited in the application see page 2563, left-hand column; figure 1 see page 2566, left-hand column, paragraph 2	11-14

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/FR 98/02107

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9606619 A	07-03-1996	CA 2198461 A EP 0776209 A	07-03-1996 04-06-1997

Form PCT/ISA/210 (patent family annex) (July 1992)